

Cracklin' Static

January 2022 Edition



**Zoom Virtual
Meeting Sat Jan 8,
8 AM
See pg 4....**

SNARS NET on DMR – Tuesdays 8pm
DMR Talk Group: 31328 SNARS

SNARS Treasury Closing Balances As of December 31, 2021

Account	
Operating	\$10,478
Savings	\$17,769
Self Insurance	\$13,510
PayPal	\$1,270
Convention	\$4,212

Total **\$47,239**

Net Monthly **\$357**
Net YTD **\$11,922**

Membership Renewals **19**

SNARS Membership as of 1-2-22

Extra	154	33%
General	127	27%
Technician	167	36%
Advanced	15	3%
No License	7	1%

Total **470**

SNARS ARRL Members

Regular	268	57%
Life	43	9%

PRESIDENT'S VOICE

President John Miller, N7JDM

Email: jmil912@gmail.com

Well, here we are in a new year with a new president. I expect to carry on the torch going into 2022's new challenges and new opportunities for the SNARS Radio Club.



We certainly had challenges in 2021 which we handled quite well I believe, no doubt there will be new challenges in 2022. We're still hunting for a location to hold in-person meetings when it is appropriate to do so.

The club is in the process of upgrading the repeater network. At last check the equipment is still floating off the coast of one of the ports, hopefully it will hit dry land soon and we can move forward with our plans to improve the system.

We're bumping up against 500 members, wow! The membership was closer to 300 when I joined up, and I can attribute our growing ranks to the leadership of the board and hard work of the membership to make SNARS what it is today. Good job people!

73,

John N7JDM



PO BOX 7727 Reno NV 89510
 Yearly Dues: \$40.00 Individual • \$50.00 Family
 775.453.4142 <http://snars.org>

2022 Officers

President.....John Miller N7JDM
 Vice-President.....John Byerly, N7ROJ
 Treasurer.....Bill Jones, AE7OX
 Secretary.....Anthony Marcin, W7XM
 DirectorWes Vick, KG7QXE
 DirectorJim Shepherd, W6US
 DirectorBarry Bettman, K6ST

2022 Staff

Cracklin StaticHowie Holden, WB2AWQ
 W7TA TrusteePeter DeBay, KE7VSR
 KR7ENO Trustee.....Howie Holden, WB2AWQ
 Control OperatorPat Sheehan, W7DED
 Youth Involvement.....Barry Bettman K6ST
 NVQSO Coordinator.....Jim Shepherd, W6US
 HistorianJon Fox, KF7KTC
 Tech Team LeadPat Sheehan, W7DED
 MembershipKim Farnham, KG7TMA
 PIOGreg Krantz, NT7Q
 VE Coordinator.....Krystal Rhoades, AJ6GC
 Meeting GreeterBill Jones, AE7OX
 Noon Net ManagerWes Vick, KG7QXE
 DMR Net ManagerAnthony Marcin, W7XM
 Reno Ham SwapVacant
 WebmasterErik Andreasen, K6CZH
 Club Sales Manager.....Julie Dodge, N7JWL
 Recording Secretary.....Doug Edmondo, W7DBE

Cracklin Static Publication

Editor: Howie Holden WB2AWQ - holden7471@msn.com
 Cracklin' Static is the Newsletter of, and sponsored by the Sierra Nevada Amateur Radio Society. Cracklin' Static is published the week before meetings. Opinions expressed herein are those of the editors and contributors and should not be considered as official expressions of the Club Officers, Staff or Club Members, or as endorsements by same.

Material for publication may be edited to enhance readability or to save space. We reserve the right to use whatever font size, line spacing or other tools as may be required to publish this Newsletter. **Deadline for input to the newsletter is 1500 hours on the Sunday** prior to the 1st Saturday (or whichever Saturday is the meeting) of each month.

SNARS Wide Area Linked System

147.030 + PL 123.0	Sparks, Fernley, Fallon	Online
147.210 + PL 100.0	Reno, Sparks	Online
147.150 + PL 123.0	Lake Tahoe, Truckee, Carson	Online
146.925 - PL 123.0	Lovelock, Fallon	Online
146.670 - PL 123.0	Winnemucca	Online
444.875 + PL 100.0	Yerington	Not Linked
444.125 + PL 123.0	Reno Sparks	Offline

DMR Systems

444.925 + CC 1	Reno, Sparks	Online
444.825 + CC 1	Dayton, Fallon, Carson	Online
443.925 + CC 1	Lake Tahoe, Truckee, Carson	Online
443.950 + CC 1	Incline Village	Online
442.875 + CC 1	Sparks, Fernley, Fallon	Online
442.850 + CC 1	Downtown Reno	Online
441.950 + CC 1	Fallon, Fernley	Offline

Fusion Systems

146.610 - PL 123.0	Reno, Carson, Dayton	Online
--------------------	----------------------	--------

IRLP / EchoLink Systems

147.300 + PL 123.0	Reno, Sparks	Online
--------------------	--------------	--------

Packet / APRS

145.050 - RNO	Reno, Carson, Dayton	Online
145.050 - ROSE	Lake Tahoe, Truckee, Carson	Online
144.390 - TOULON	Lovelock, Fallon	Offline

Standalone Systems

147.390 + PL 100.0	Reno, Carson, Dayton	Online
443.075 + PL 123.0	Reno, Carson, Dayton	Online
927.0875 + PL 114.8	Reno, Carson, Dayton	Online

Online
 Offline
 Not Linked

Weekday on the SNARS Linked System

147.030 + PL 123 – Sparks/Fernley
 147.150 + PL123.0 – Lake Tahoe / Truckee
 147.210 + PL 100.0 - Reno
 444.875 + PL 100.0 - Yerington
 146.925 - 123.0 – Lovelock / Fallon
 146.67 – PL 123.0 - Winnemucca

Monday through Friday @ 12:00pm

Open to all amateur radio operators. A general informational net for the amateur radio community of Northern Nevada and Eastern California. Radio Checks and Questions are welcomed.

Nets on the SNARS Linked Systems

147.210 + 100.0 | 147.030 + 123.0 | 147.150 + 123.0
 147.670 – 123.0 | 146.925 – 123.0 | 444.875 + 100.0

ERC Net for NV and Northern CA	Monday @ 9:15pm
N. Western NV ARES Net	Thursday at 7:30pm
Northern Nevada Preppers Net	Wednesday @ 8:00PM
Hospital Net	Friday @ 10:00AM

Nets on IRLP (GSR) System

Repeater: 147.300 + 123.0

Amateur Radio Newline	Monday - 8:00PM
Nevada Skywarn Net	Wednesday - 7:00pm

Nets on Simplex/HF

Jefferson Noon Net	7.204 LSB	Daily - 12:00pm
6 Meter Net	50.350 USB	Tuesday – 8:00pm
2 Meter Weak Signal	144.250 USB	Wednesday - 8:00PM
2 Meter Simplex Net	146.500 FM	Thursday – 8:00PM
10 Meter Net	28.350 USB	Sunday – 2:00PM

SNARS Weekly DMR Net – Tuesdays
 8:00PM

SNARS Talk Group 31328

Open to Members and Guests. A general information net each week on DMR.

SNARS CALENDAR

Reno QRP Group Meeting Tue, January 11, 2022,
 11am – 12pm Jack's Coffee Shop #2, 605 N Wells
 Ave, Reno, NV Contact Ed, WD7Y
WD7Y@sbcglobal.net for more info.

SNARS Board Meeting Wednesday, January 12,
 6:00PM. Location and mode Chin Chin, Sparks, and
 Zoom

HAM RADIO NIGHT on Zoom January 17, 7:00 PM ,
 see <https://snars.org/hamradionight/>

Next months SNARS Breakfast Meeting Feb 5, 2022.
 Location and media mode tentative depending on
 Board decision and local restrictions.

WELCOME NEW MEMBERS

AS OF JANUARY 2

Tyler	Maggert	K7TDM
Krista	Gazzaway	KK7COG
Donald	Bussard	KC7BFP
Joe	Pursel	KK7COD
Kristin	Carini	KK7CON
David	Suazo	KK7BKT
Mike	Van Camp	K7MVC
Sherraden	Marston	KI6OPJ
Thomas	Marston	KI6OPK

SNARS Virtual Monthly Meeting

SNARS (virtual on zoom conferencing) Monthly Meeting on
Saturday 1-8-22 8:00AM PST

**Presentation: USS Hornet -
Aircraft Carrier & Amateur
Radio Club NB6GC with
Geoff K6ERA**



TO REGISTER, go to:

<https://us06web.zoom.us/meeting/register/tZYpcO-pqj4sHtMuDeQd-AjddgRrfxcQPTDL>

Any questions, email Barry k6st@arri.net

THE NAME OF THE GAME

Jim Shepherd, W6US nvjims@gmail.com

WALLPAPER...

From the very start, you will start collecting 'wallpaper' in your ham shack.

First, and foremost, you will download a nice official certificate from the FCC with up to five letters and a number prominently displayed, your hard earned amateur radio license! Sign it, put it in a nice frame and hang it in a place of honor.

The next piece of wallpaper that most of you will get is your membership certificate for SNARS. Hopefully you will follow this up with joining the ARRL and getting their membership certificate also.

Now, you need to get on the air to start chasing more wall hangings. When you pick up your mail and find that first QSL card, be it from someone across town or from some exotic DX location, you will start a collection that will follow you through your lifetime of ham radio. There are all sorts of hanging carriers and other options for you to display and protect your collection.

There are hundreds of awards and certificates out there waiting for you to qualify by your on-the-air activities. One of the easiest to get is the **ARRL Worked All States (WAS)** award. All you have to do is to work and get a QSL card from a ham in every state using ham radio. You can use any of the ham bands except 60 meters to make the contacts, and, for your initial award, it can be done using a mix of modes. There are endorsements to this award for all on a single band, different modes, and even the use of ham satellites. There is also the super award, 5 band WAS for working every state on 10, 15, 20, 40, and 80 meters. It is quite possible to get contacts in all 50 states in a weekend, but it may take time to get all the conformations via QSL cards or electronically on Logbook of the World. More information is at <http://www.arrl.org/was>



On VHF, the premier award is **VUCC (VHF/UHF Century Club)**. You need to work 100 different grid squares on 6 meters or 2 meters or using ham satellites. On the higher bands, the number of contacts gets smaller, but it hard to have 5 grid zones within your range on 10 GHz. Most awards are for 6 meters as it is easier to get the more distant grid zones. See <http://www.arrl.org/vucc> for the complete rules

DX chasers have the **DXCC (DX Century Club)** to recognize their skill in contacting the rare ones out of the country. The initial award is for 100 countries, and, like the WAS, there are endorsements for additional contacts, modes and bands. If you have confirmed en-



tries of 331 or more, of the current 340 eligible DX entities, you will be listed in the Honor Roll and can get a very nice wall plaque. There is more information at <http://www.arrl.org/dxcc-rules>

There are scores of small contests and special event stations that send out certificates for participation. Some of the foreign ones have them in their native language and the only thing readable is your call sign! With the advent of inexpensive quality color printing, some of these are photos of the operation and make a nice addition to your brag wall. **State QSO parties** are great way to get a collection of colorful certificates, and there are only a couple of us that regularly participate here in Nevada, your chance of getting a 'First Place' certificate is very good!



Some photos of you operating, be it at Field Day, manning a station at a public service event, or your antennas against a beautiful sunset can fill the gaps between the rest of the wallpaper. News clippings with a story about your good works with ham radio are also a welcomed addition.

Then there are frequency charts and other operating aids. Maps including call sign prefixes of the world make it easier to track your contacts at a glance. A Great Circle map centered on your QTH makes it easier to point your beam in the right direction. While not exactly wallpaper, a clock showing UTC time and date makes it easier to log contacts and to make schedules. If you really want to get fancy, you can get a **Geochron clock** which is a map of the world that shows day and night which is a great help with propagation.



Every shack is different, and the items hanging on the wall makes a lot of that difference.

MIKE'S MISSIVES CHAPTER SIXTY THREE

Mike Katz, N7MSK

FCC PART 97

§97.3 Definitions.

(a) The definitions of terms used in part 97 are: **(Selected definitions)**

(1) Amateur operator. A person named in an amateur operator/primary license station grant on the ULS consolidated licensee database to be the control operator of an amateur station.

(4) Amateur service. A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

(5) Amateur station. A station in an amateur radio service consisting of the apparatus necessary for carrying on radiocommunications.

(8) Bandwidth. The width of a frequency band outside of which the mean power of the transmitted signal is attenuated at least 26 dB below the mean power of the transmitted signal within the band.

(13) Control operator. An amateur operator designated by the licensee of a station to be responsible for the transmissions from that station to assure compliance with the FCC Rules.

(22) Frequency coordinator. An entity, recognized in a local or regional area by amateur operators whose stations are eligible to be auxiliary or repeater stations, that recommends transmit/receive channels and associated operating and technical parameters for such stations in order to avoid or minimize potential interference.

(23) Harmful interference. Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with the Radio Regulations.

(39) Remote control. The use of a control operator who indirectly manipulates the operating adjustments in the station through a control link to achieve compliance with the FCC Rules.

(43) Spurious emission. An emission, or frequencies outside the necessary bandwidth of a transmission, the level of which may be reduced without affecting the information being transmitted.

For a complete list of definitions, see: <https://www.arrl.org/part-97-text>

SHORT TAKES (By Jim Shepherd W6US)

CONTEST CALENDAR

The month starts out with the ARRL RTTY Roundup on Saturday, January 8 at 10:00 local time. It uses Most digital modes including FT8 and FT4 and runs until 1600 on Sunday. Those using the WSJT-X modes should be using the 'RTTY Roundup' overlay in the 'Advanced' setup. January 15 to 17 is the ARRL January VHF contest on all the bands from 6 meters on up. The results for the Nevada QSO party are posted on the <http://nvqso.com/> website. These and other contests information can be found at:

<https://www.contestcalendar.com/contestcal.html>

DX

There are some operations starting to pick up. St Martin, Sint Maarten, and Aruba are some of the featured DX operations out of Caribbean this month. At the end of the month, there is possibly going to be an activation of Bouvet Island. More information can be found at <https://www.ng3k.com/Misc/adxo.html>

THIRD MONDAY ZOOM HAM RADIO NIGHT

We will have our popular Ham Radio Nights via ZOOM to get your questions answered. It will be held at 7pm on Monday, January 17. More information, including the link will be published before that date.

NAME THAT RIG?

(Answer on page 11)



K7RAW FOLLOWUP

SEMINAR SERIES: Antenna Systems Demystified

with Rudi Wiedemann, K7RAW <rudi@wiedemann.cc>

Thank you to all those who participated in our first Seminar Series, *Antenna Systems Demystified* held on December 11, 2022. The entire seminar is now available on the SNARS YouTube channel at: <https://youtu.be/UaQgH1Mfmyw>

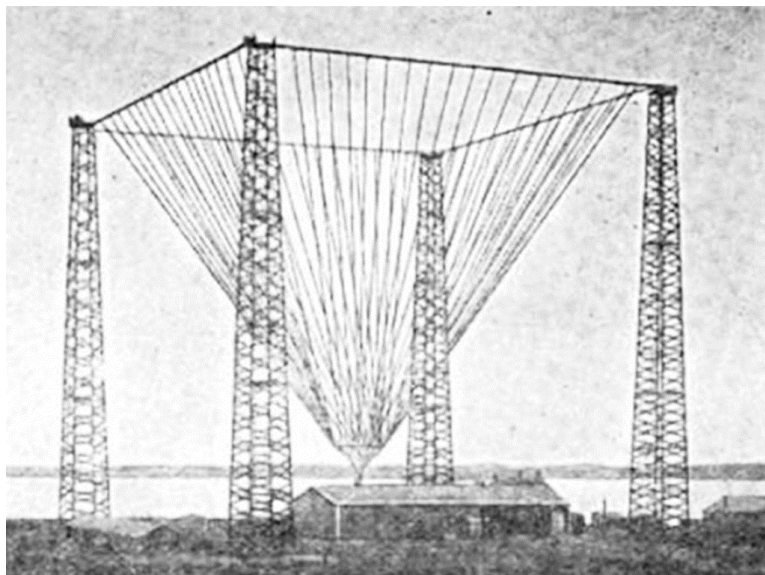
The Powerpoint Presentation is now available as a PDF file here: [Antenna Systems Demystified Slide Deck](#)

I'm offering a "group buy" opportunity for all hams I know. I have a good source for stainless telescopic whips. Here are the specs.

- **18 FEET EXTENDED** (perfect for 40-10m dipoles or verticals)
- **21 INCHES COLLAPSED**
- **13 SECTIONS**
- **3/8-24 X 1/2 BASE THREAD**
- **\$50 (VS \$80 FOR MFJ)**
- **30-60 DAY LEAD TIME**
- **NO TAXES OR SHIPPING!**

NO QUANTITY LIMIT!

Contact me: rudi@wiedemann.cc



HAM RADIO NIGHT

3rd Monday of each month at 7PM PT on Zoom
Join together and Elmer each other for Ham Radio Night on **January 17, 2022, 7PM**

The topic smaller breakout groups will be: **2022 HAM RADIO GOALS**, **ANALOG VHF/UHF**, **DMR/FUSION**, **ANTENNAS**

Each participant can move themselves around to different breakout topics in zoom conferencing to enjoy.

If you have any questions or would like to be of service as an Elmer, please contact K6ST Barry k6st@arrl.net



Register below for our next Ham Radio Tech Night, SNARS (virtual on Zoom conferencing) Jan 17, 2022, 7:00PM PST
<https://us06web.zoom.us/meeting/register/tZYkcOmqqj0uHtWu-K0bpG7g-y5EtZvE7ROc>

YOUTH INVOLVEMENT

SANTA TALKS ON THE CHRISTMAS EVE EDITION (12/24/2021) OF THE SNARS NOON NET



Kids Talk to Santa on Ham Radio

On Christmas Eve for the **SNARS** Noon Net, Barry K6ST net control with special phonetics "Kilo Six Santa Talks" brought some light cheer to the airwaves. As **SNARS** members and guests checked on the Friday of Christmas Eve, net control asked if they wanted to talk to Santa.

Lo and behold, a youngster of ham radio operator K7TDM Tyler had a fun 5 minutes QSO on the air and Santa spoke with the young one also.

K7TDM Tyler and his XYL gave their permission for you to see a short 5-minute video of the QSO. It will be posted soon on the www.snars.org website under Activities, Youth. Feel free to enjoy it.

Thanks to the youth:

73,

Barry K6ST
Nevada Section Youth Coordinator
ARRL (American Radio Relay League) www.arrl.org
The national association for amateur radio



10 METER CONDITIONS IMPROVING WITH SOLAR CYCLE 25

This December I participated in the ARRL 10 Meter Contest, with very good results. The contest was held from 0000Z, December 11 to 2359Z December 12. I wasn't sure how the band would be before I started, but I had decided beforehand that I would try to work the contest as a QRP station for the first time. The ARRL qualifications for SSB (Single Side Band) QRP, or low power operation, means a maximum of 5 watts PEP (Peak Envelope Power) output. As I don't have an independent Watt meter, I just set my transmitter to a 5 Watt transmit output. That is the lowest setting on my Kenwood 570S. I was using a Comet CHV-6X rotatable dipole for the antenna.

I listened in on 10 meters at the beginning of the contest, trying to see if I could hear any stations clearly enough to try and contact. My first contact was with a New Hampshire station, on December 11 at 17:50Z. I continued to "hunt and pounce" on stronger stations until 19:08Z, when the band dropped out. I made seven contacts that day. The next day the band again became active about 17:00Z, and remained so until about 22:30Z. I was able to make contact with 26 more stations, including four in Brazil and one in Suriname. Overall the contest was a blast, and I enjoyed the challenge of working QRP in a contest for the first time.

On December 19 (locally) I was working 10 meters again, just making random QSOs. The band conditions were excellent! I contacted 12 stations on 10 meters that day. One station in Michigan was very strong, and we reduced power to 5 Watts for both stations. There was very slight change in the contact. So we reduced mike gain from 50% down to 1% on our transmitters. We did see a reduction in received signal, and estimated that we were simulating about 100mw of PEP in our signals. But the low band noise and optimum ionospheric propagation made easy communication possible.

I hope that we will continue to see even greater improvement with the 10 meter band over the next few years. I have always enjoyed the challenge associated with the band, and look forward to many exciting QSOs in the future.

Jon M. Fox - KF7KTC
Dayton, NV (temporary only!)
KF7KTC@nevadalink.com

W7SSB's FUN STUFF

RADIO HISTORY

Things You Should Know About Your Hobby The more you know about our amateur radio history, the better you will enjoy the hobby.

A Brief History of Amateur Radio

Experimentation in what was to become a new field called "radio" started around 1888 when Heinrich Rudolph Hertz proved the existence of electro-magnetic waves. In the 1890's Italian inventor Marconi developed a communications system based on "Hertzian Waves". The term "radio" came along later. Many amateur wire telegraphers started experimenting with wireless communications.

The word "radio" was coined by Edouard Branly, a French Physicist in the year 1897. The word is based on the verb to radiate. The word "radio" appeared in a 1907 article by Lee De Forest. The United States Navy adopted the term "radio", in 1912. The word became popular in the 1920s in the United States.

By 1910, there were many instances of harmful interference by unlicensed experimenters with governmental and commercial operations. In 1910, Congress passed the Wireless Ship Act, which required many ships to carry wireless equipment and operators.

In 1912, Congress passed the Radio Act of 1912, which restricted experimentation in the medium and long wave bands, and relegated experiments to the short wave bands. Experimenters found ways to use the short wave bands. (3 – 30 MHz.) Licensing procedures were set up for all users of radio. Licenses were initially controlled by the Department of Navy. Later, the license issue was transferred to Department Commerce & Labor. There were two classes of amateur licenses issued; First Grade, and Second Grade. An Unlimited Endorsement was later available to First Grade operators.

In 1914 through 1916 in WW1, licensed amateur operators were required to cease operating, and dismantle their equipment.

In 1915, the American Radio Relay League (ARRL) was established to further the interests of amateur radio operators. Hiram Percy Maxim was the first president of the ARRL. ARRL remains the largest advocacy organization for Amateurs in the United States.

In 1923, regulators added the Amateur Extra First Grade license, again with Unlimited Endorsements available.

In 1927, Congress passed the Radio Act of 1927, which created the Federal Radio Commission (FRC), under the Department of Commerce. Licensing responsibility was transferred to the FRC.

In 1934, Congress passed the Communications Act of 1934, which created the Federal Communications Commission. Licensing responsibility was transferred to the FCC.

Under the FCC, Amateur licensing was reorganized to three classes of licensees. Class "A", "B", and "C":

Class "A" licenses were awarded to First Class Licensees with Unlimited Endorsements (including Amateur Extra First Class licensees with Unlimited Endorsements).

Class "B" licenses were awarded to First Class Licensees without Unlimited Endorsements (including Amateur Extra First Class licensees without Unlimited Endorsements).

Class "C" licenses were awarded to Second Class Licensees. The Class "C" license was awarded to operators who took their license exam at 'another than a location than an FCC office'. Class "C" licenses could be upgraded to Class "A" or "B" by taking (and passing) a license upgrade exam at an FCC office. Class "C" licenses carried the same operating privileges as Class "B" licenses.

During WWII, Amateurs were once again prohibited from operating. The ban was lifted during 1946.

In 1947, the FCC removed the portion 27.00 MHz – 30.00 MHz from the Amateur 10 meter band, to reallocate to other services.

In the 1950's amateurs were experimenting with Single Sideband (SSB) communications.

In 1951, the FCC reorganized the Amateur licensing structure, called Incentive Licensing.

There were six classes of license that an Amateur could hold; Novice, Technician, General, Conditional, Advanced, and Amateur Extra:

The FCC created the Novice Class license as the entry level license, with a 5 wpm code requirement (Element 1A) and a written test (Element 2). The Novice Class had CW operating privileges in the HF bands. Originally, the Novice Class license was issued for a term of one year, and could not be renewed (you had to upgrade, or lose your privileges), later raised to five years (renewable), and eventually to the current renewable ten year license term.

The FCC created the Technician Class license, with a more difficult written test (Element 3), which added all operating privileges in the bands above 30 MHz. Operators were required to possess a Novice Class license as prerequisite, to test for this license. This license was issued for a five years (renewable), and eventually to the current renewable ten year license term. In 1987, the FCC replaced the (Element 3) exam with the (Element 2) exam as a requirement to hold this license. In 1991, the FCC created the current No-Code Technician Class license. During 1994, the FCC started referring to Technician Class licensees, who also possessed a Novice Class license (and therefore had HF privileges), as Technician Plus licensees.

The FCC created the General Class license, with the same (Element 3) exam as the Technician Class license, and with a requirement to pass Element 1B, a 13 wpm code test. Existing Class "B" operators were converted this class of license. This license was issued for a five year term (renewable), and eventually to the current renewable ten year license term.

(Continued next page.....)

W7SSB's FUN STUFF (Continued)

The FCC created the Conditional Class license. Existing Class "C" licensees were awarded this license. The Conditional Class could be converted to a General Class license, by taking an upgrade examination at an FCC office. In 1978, the FCC eliminated this class of license, and all existing licensees were converted into General Class licensees. This license was issued for a five year term (renewable).

The FCC created the Advanced Class license. The requirements to hold this license were to hold a General Class license, and pass the Element 4A exam. Existing Class "A" were converted to this license class. This license was issued for a five year term (renewable), and eventually to the current renewable ten year license term.

The FCC created the Amateur Extra Class license. The requirements to hold this license were to hold an Advanced Class license, and pass the Element 4B exam and pass Element 1C, a code test at 20 wpm. This license was issued for a five year term (renewable), and eventually to the current renewable ten year license term.

In 1982, Congress passed Public Law 97-259 which amended the Communications Act of 1934. In 1984, the FCC authorized the current volunteer examiner system.

In 1987, the FCC changed the requirements for several license classes. (See comments above.)

In 1991, the ITU proposed to eliminate the Morse Code requirement to hold a domestic Amateur Radio license. It still would be required for license classes with international privileges.

In 2000, the FCC reduced the number of license classes that could be newly earned to the current Technician Class, General Class, and Amateur Extra Class licenses. The legacy licenses, Novice, and Advanced, could be renewed, but no new licenses could be earned. The FCC created the current (No-Code) Technician Class license. Licensees who earned their Technician Class license before 1987 were awarded Tech (Plus) licenses, with operating privileges of both Novice and Technician Class licensees. The Morse Code requirement for all licenses was reduced to 5 wpm. Licensees who held a current Technician issued before March 21, 1987, could apply at a VE session, to have their current license upgraded to General. The license term was increased to the current ten year license term.

In 2003, the ITU eliminated the Morse Code requirement to hold any Amateur Radio license.

On February 23, 2007, the FCC eliminated the Morse Code requirement for all US issued amateur licenses.

Technician Class licensees gained CW operating privileges in the 'Novice Bands' HF bands. Novice Class licensees gained all operating privileges in the bands above 30 MHz.

In 2014, the FCC, ruled that some expired licensees could be granted certain credits for their former licensed status.

Compiled by Randy Jenkins, KA6BQF

The story of DXing starts with amateur radio operators

So what the heck is DXing, anyway? Long story short, it's the idea of catching far-away signals using radio or television equipment, just to see if it can be done—something reflected by the jargon term "DX," which started as telegraph lingo for "distant reception."

The concept of DX-ing dates way back to the early amateur radio era in the 1920s, and in some ways, helped turn the concept of running a ham radio station into a game.

Experienced amateur radio users, especially those with a lot of equipment, compete to see how far their equipment can reach, and how many stations they can hit from a long distance away.



In the pre-internet era, radio operators confirmed their contacts by sending "QSL cards" to operators who asked for them. These cards served a similar process to a stamp on a passport, or perhaps a postcard—they confirmed that a you had made a connection to a certain country or geographic area. (They're also cool as hell. [This archive of QSL cards](#) highlights just how far the phenomenon went, along with the sometimes impressive designs of the cards.)

The 1914 launch of the [American Radio Relay League](#) further helped these ham radio operators get more formally organized, and the group eventually helped formalize DXing into a full-fledged yearly contest with rules and standards. In 1935, an ARRL employee named Clinton B. DeSoto set the ground rules of keeping score in the DXing process, figuring out a way for ham radio users to keep score of the number of "countries" they've contacted.

This was not an easy process—because, as it turned out, ham radio "countries" don't work best by treating them as countries with traditional borders, according to DeSoto. Why's that? Well, countries tend to be broken up in complicated ways. For example, if you live in Nebraska, reaching a signal in Alaska is more significant than reaching a signal in Ohio, because of the significant geographical difference.

"It is obviously incorrect to accept either geographical or political divisions alone, as immediately the most glaring inconsistencies appear," DeSoto explained in the article, [originally published](#) in *QST Magazine*. "The only general solution that comes anywhere near to solving the problem seems to be to reduce the definition of 'country' to the smallest common denominator—a single unit in the world's geographical and political proportions."

ARRL has since built on DeSoto's work and now runs a yearly contest [called the DXCC Challenge](#), with prizes for the operators that hit the most "countries." There are even online vendors [that sell custom QSL cards](#), not that they're necessarily needed, because ARRL now [offers an equivalent online service](#) that counts toward awards.

Ham radio may have been the starting point for the DXing phenomenon, but there's a lot of other spectrum out there, and that spectrum—be it shortwave, AM, FM, UHF, or VHF—each has its enthusiasts.

Stay tuned, till next month ! Don W7SSB

(Editor's note: The words in [bold blue](#) on this page are clickable links to the various topics herein.)

FUN STUFF FOR JANUARY

January offers no state QSO parties, but does have four ARRL or NCJ contests, all shown in BOLD. The Classic Exchange and the AWA contests are for those interested in older radios, and the Winter Field Day is an increasingly popular event. Give it a try!

8 Jan 1800 to 9 Jan 2359 3.5-28 ARRL RTTY Roundup Dig

www.arrl.org/rtty-roundup

15 Jan 1800 to 16 Jan 0559 1.8-28 North American QSO Party, CW

www.ncjweb.com

15 Jan 1900 to 17 Jan 0359 50 and up ARRL January VHF Contest

CW Ph Dig www.arrl.org/january-vhf

22 Jan 1800 to 23 Jan 0559 1.8-28 North American QSO Party, SSB

Ph www.ncjweb.com

23 Jan 1400 to 26 Jan 0800 1.8-144 Classic Exchange, Phone

www.classicexchange.org

26 Jan 2300 to 30 Jan 2300 1.8-7 AWA Linc Cundall CW Memorial

CW www.antiquewireless.org

28 Jan 2200 to 30 Jan 2200 1.8 CQ 160-Meter Contest, CW

www.cq160.com

29 Jan 1900 to 30 Jan 1900 All Winter Field Day CW Ph Dig

www.winterfieldday.com

Check out the rest here:

<http://www.arrl.org/files/file/Contest%20Corral/2022/January%202022%20Corral.pdf>

If you're not into contests, there's always DX to chase! The list is small probably due to the latest COVID outbreak. You don't hear St Martin/Sint Maarten all that often, so having both sides (French and Dutch) of the island on the air at the same time is fairly rare. Montserrat is not all that common either since the volcanic eruption in 1995 and several after that, much of the population evacuating. Mauritius is in Africa, always choice DX pickings.

Jan 01 to Jan 20 **St Martin** FS

Jan 04 to Feb 06 **Sint Maarten** PJ7

Jan 09 to Feb 18 **Montserrat** VP2MDF

Jan 20 to Jan 27 **Mauritius** 3B8HH

Check <https://www.ng3k.com/Misc/adxo.html> for updates on DXpeditions to make sure they're still a go!

RENO QRP SLOW SPEED CW NET

NEXT NET SESSIONS (two of them) WILL BE January 6th and 20th at 11 AM PST. Target frequency 7.045 MHz, if busy search somewhere near that frequency.

THE FOLLOWING SHOULD ALWAYS BE IN YOUR REPORT:

SNARS - Sierra Nevada Amateur Radio Society, Inc—<http://snars.org>

NAME, RST, LOCATION, RIG, POWER, ANTENNA.

REMEMBER TO INCLUDE RST IN YOUR REPORT

Feel free to add something else in your exchange.

Take some time to report RST for other OP's or anything else that comes to mind.

Sharing information about you and your equipment will accomplish two things.

First It gives you and everybody else practice sending and copying.

Second It is nice to spend time on the air with your friends. Consider this a QRP meeting on the air.

Relax and have some airtime fun with your friends.

73/72 Ed/WD7Y

NAME THAT RIG (from page 6)

OK, I didn't expect too many people, other than a few long-time hams to get this one, and even those few who recognized at least the brand probably didn't guess the model. This is from an English company, **Eddystone**, which had a long and glorious history in British radio lore from the mid 1920s to the early 1990s. This is a model **S-640** receiver from 1947, featuring the famous **Eddystone** dial. The **Eddystone** dial used a sophisticated gear drive, with high accuracy and no backlash. (There were several "imitation Eddystone" dials, generally using vernier reduction type drives including various National Company dials, but none are even close to the genuine article.)

The **Eddystone S-640** used 9 tubes (valves in British parlance), and featured both general coverage and bandspread for Amateur use. The chasses and other mechanics were very well made and plated for protection. Circuits were anti-fungus coated because Great Britain at the time was shipping electronics throughout its "empire", which covered much of the globe. Later Eddystone receivers featured a slide-rule type dial but still with the gear drive, and were considered some of the finest receivers of their time. The model EA12 Ham band receiver shown below was solid state, made in 1964 and was super stable, calibratable to less than 0.5Khz, sensitive and selective and will hold its own even in today's crowded contest conditions.



BREAKING NEWS!!! HOLD THE PRESSES.....

From Jim Shepherd, W6US:

It was just confirmed, we got the main group use area at Washoe Lake State Park for Field Day this year....

ARES NEWS

EVENTS CALENDAR

EVENT 2022	DATE	DATE END	SPONSOR/ORGANIZER	COORDINATOR	CONTACT
Silver State 50/50 race	5/21/22		Silver State Striders	Steve KS6A	ks6a@sbcglobal.net
Stetina Paydirt	5/22/22		John Prouty; Bike Monkey	Bob Miller WA6MTY	wa6mtty@gbis.com
Truckee Dirt Fondo Bike Ride	6/11/22		John Prouty; Bike Monkey	Bob Miller WA6MTY	wa6mtty@gbis.com
Indian Valley Century Bicycle Ride	TBD		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
America's Most Beautiful Bike Ride	6/5/22		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Pony Express Re-Ride	6/6/2022	6/16/22	SIERA	Jeff Cauhape K7BCV	j_cauhape@yahoo.com
Alta Alpina Challenge	6/25/22		Alta Alpina Cycling Club	Jennie Hamiter, KE7YBA	jenniehamiter@mac.com
Running With the Bears	TBD		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
Bear Grawl Gravel Grinder	TBD		Plumas ARC	KJ6CUG	dltrotter@sbcglobal.net
Lost and Found Gravel Grinder SBTS	6/22/22		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
Death Ride	7/16/22		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Tahoe Rim Trail	7/15/22	7/17/22	Tahoe Mountain Milers	Bob Miller WA6MTY	wa6mtty@gbis.com
Trailblazer Challenge (two events)	TBD		Make-A-Wish Foundation	Bob Miller WA6MTY	wa6mtty@gbis.com
Vegas to Reno Off Road Race	9/10/22	9/12/22	Best in the Desert Racing Assn	Keith KC7HTK	kc7htkeith@hotmail.com
Tour De Tahoe	9/11/22		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Reno Air-Races	9/14/22	9/18/22	WC-ARES	Bob Miller WA6MTY	wa6mtty@gbis.com
Grinduro SBTS	TBD		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
Nevada Day Parade	10/29/22		NV AREA NW DEC	John Abrott KD7NHC	jabrott77@gmail.com , cell 775 790-1739.
Sparks Turkey Trot	11/24/22		WC-ARES	Bob Miller WA6MTY	wa6mtty@gbis.com

INTRODUCTION TO EMERGENCY COMMUNICATIONS

Announcement of WCARES On Line EC-001 Class, Winter 2022

Registration is now open for an online class, "Introduction to Emergency Communications, EC-001". American Radio Relay League (ARRL) Field Instructors from Washoe County Nevada Amateur Radio Emergency Service (WCARES) will conduct this no-cost class.

This is an approved ARRL Field Course conducted online, targeting Radio Amateurs in the [NW Nevada District](#), comprising the following Nevada Counties: Carson City, Churchill, Douglas, Humboldt, Lyon, Mineral, Pershing, Storey, and Washoe. Registration is also open to students in adjacent Northern California counties and other Radio Amateurs throughout the state of Nevada.

The course employs a combination of on-line independent, self-paced study (using the Canvas on-line learning platform) and weekly video discussion/question & answer sessions on Saturday mornings 0900-1000 PT from 15 January through 2 April 2022 (using the Zoom teleconferencing application). An internet or cellphone connection capable of supporting Zoom conferences will be required to attend these sessions live. All sessions will be recorded for later retrieval and playback to accommodate students who cannot attend the live sessions. Zoom clients run on most operating systems, including computers, cellphones, and tablets.

Students need to complete the course prerequisites before taking the EC-001 course final exam.

These are two no-cost on-line Federal Emergency Management

Agency (FEMA) independent study courses [IS100.c](#), Introduction to the Incident Command System, and [IS-700.b](#), An Introduction to the National Incident Management System. FEMA Course completion certificates or course transcripts are required to take the final exam which will be conducted by ARRL Volunteer Examiners or on-line through the ARRL website.

WCARES will be tracking hours spent on-line and in off-line study for this class. This includes study time for the aforementioned prerequisite FEMA classes. Instructions for reporting class hours will be discussed at the first class Zoom session.

EC-001 class completion is required for Level 2 certification in the ARRL ARES Standard Task Book, and Full Membership Level in the WCARES organization.

To register for the Winter 2022 WCARES EC-001 class, send emails to both:

Bob Miller WA6MTY
Washoe County ARES Emergency Coordinator
WA6MTY@wcares.us
Tel (775) 843-5952

David Richards AF6MN
Lead Instructor, EC-001
david@drdr.net
Tel (650) 245-5558



Board of Directors Meeting Agenda

December 8, 2021 - 6:10PM

At Chin Chin plus Zoom

1. Call to order and roll call at 6:10 PM

Board of Directors:

Anthony Marcin, W7XM	P	Barry Bettman, K6ST	P	John Miller, N7JDM	P
Bill Jones, AE7OX	P	John Byerly, N7ROJ	P	Wes Vick, KG7QXE	P
Jim Shepherd, W6US	P	Doug Edmondo, W7DBE	P		

Guests in attendance: None

2. Approval of Minutes - Discussion/Action

The board approved the November 2021 meeting minutes with one addition – ***The JANUARY 2022 meeting will on the 8th and not the 1st*** as a result of subsequent discussion.

3. Approval of Agenda - Discussion/Action

The board approved the agenda.

4. Reports

A. President's Report – Checking on the repeater status with Sierra Communications.

B. Secretary Report – 474 members, will be working on the Secretary of State updates for the new board.

C. Treasurer – November 2021 End of Month, Operating: \$10,459, Savings: \$17,683, Self Insurance: \$13,340, Paypal: \$1,188, Convention: \$4,212. Net Monthly \$353, net YTD: \$11,564. Membership renewals 17, Donations year to date \$7,051 (Amazon \$228, Members \$6,740, Paypal \$83)

Notes: Moved \$1,000 from PayPal to operating, Moved \$170 to self insurance, Moved \$85 to savings, Renewed SNARS.org and WADG.org for 3 years (\$127.02, and renewed the club liability insurance \$454.50.

D. Technical Team – Pat

1. Repeater Upgrade – see above
2. Looked at Davidson re the power outage. Turns out the old knife switch with fuse got bumped and was not connected. Was fixed temporarily but the switch is not needed and needs to be removed from the circuit.
3. Working to correct the link between Rose and Lobdell.

E. Control Operators / Trustee

No report

F. Events

Jim noted that he is making 14 Plaques for NVQSO winners. Noted 3 out-of-state recipients. All results can be found at <http://nvqso.com/2021-results/#>

G. Education & Youth Activities

1. Seven people, so far, are interested in Rudy's upcoming Nano VNO class on December 11th
2. Working on something for Kids Day on the first.
3. The president of the USS Hornet radio club will be speaking at the January 8th club meeting

H. Noon Net - Noon Net Manager – nothing to report

5. Old Business

None

6. New Business

None

7. Board member and Public Comments

- A. During this time members and board of directors may speak on any topic regardless if the item was agendaized.
- B. Barry – Likes what is going with the team, thanked Doug for helping with the Zoom meetings
- C. John M. Will appreciate any and all help in January when he takes over
- D. Bill – reiterated the finances
- E. Jim – Need to get more people involved in contests
- F. Wes – Need more net control operators for the noon net
- G. Doug – Thanked John Byerly for all his efforts.

8. Adjournment - Action

- A. Next Meeting: January 12th, 2021. Location Chin Chin plus Zoom
- B. Meeting Adjourned at 6:42pm



Board of Directors Business Meeting Minutes

December 8, 2021 - 5:58PM

At Chin Chin plus Zoom

1. Call to order and roll call at 6:00 PM

Board of Directors:

Anthony Marcin, W7XM	P	Barry Bettman, K6ST	John Miller, N7JDM	P
Bill Jones, AE7OX	P	John Byerly, N7ROJ	Wes Vick, KG7QXE	P
Jim Shepherd, W6US	P			

Guest(s) In attendance: Doug Edmondo, W7DBE

2. Approval of Minutes - Discussion/Action

No prior minutes to approve

3. Approval of Agenda - Discussion/Action

The board approved the agenda

4. Actions

A. Set new board for upcoming year

1. John Miller was nominated for Board President. After closing nominations, the Board voted John Miller as the new president.
2. John Miller queried board members on official board positions.
3. John Byerly accepted Vice President
4. Bill Jones accepted Treasurer
5. Tony Marcin Accepted Secretary
6. No other changes in director responsibilities or in club officer roles
7. Tony and Bill will handle updates with the State and the club's bank to reflect the change

8. Adjournment - Action

The meeting was adjourned at 6:06pm